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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,893	12/29/2000	Robert Palifka	09991-014001	6685

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT PAPER NUMBER

2863

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/749,893

Applicant(s)

PALIFKA ET AL.

Examiner

Michael P. Nghiem

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-33,35-45,48,50-52,54-58,60,61 and 63-106 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-33,35-45,48,50-52,54-58,60,61,63-100 and 102-106 is/are allowed.
- 6) ☒ Claim(s) 101 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The Amendment filed on February 5, 2005 has been acknowledged.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 101 is rejected under 35 U.S.C. 102(e) as being anticipated by Moynihan et al. (US 6,755,511).

Moynihan et al. discloses a method (Fig. 5) of manufacturing an ink jet printing module (2) comprising:

- contacting a first component (34, 34', Fig. 5) of an ink jet printing module (2) having a surface with a thermoplastic bonding component (epoxy, column 3, lines 2-3);

- heating the surface to bond the surface to the thermoplastic bonding component (column 3, lines 2-3) wherein the first component of an ink jet printing module includes lead zirconium titanate (PZT, column 2, lines 58-59) and the thermoplastic bonding component has a thickness between 10 micron and 125 microns (15 microns, column 5, lines 64-67).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 101 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeYoung et al. (US 4,751,774) in view of Moynihan et al..

DeYoung et al. discloses a method of manufacturing an ink jet printing module (Fig. 3) comprising:

- contacting a first component (12) of an ink jet printing module (3) having a surface with a thermoplastic bonding component (14);

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- heating the surface to bond the surface to the thermoplastic bonding component (via thermoplastic cement 14) wherein the first component of an ink jet printing module includes lead zirconium titanate (column 5, lines 9-12).

However, Deyoung et al. does not disclose that the thermoplastic bonding component has a thickness between 10 micron and 125 microns.

Nevertheless, Moynihan et al. discloses that the thermoplastic bonding component has a thickness between 1 micron and 150 microns (15 microns, column 5, lines 64-67) for the purpose of effectively bonding a piezoelectric element to a flex print element (column 3, lines 2-3).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the thickness of thermoplastic bonding component of DeYoung et al. to that taught by Moynihan et al. for the purpose of effectively bonding a piezoelectric element to a flex print element.

Allowable Subject Matter

3. Claims 29-33, 35-45, 48, 50-52, 54-58, 60, 61, 64-100, and 102-106 are allowed.

Response to Arguments

4. Applicant's arguments filed February 5, 2005 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 rejections, Applicants argue that claims 29 and 52 were previously rejected.

Examiner's position is that claim 101 was also previously rejected under 35 USC 102 and 103 as discussed above.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takeuchi et al. (US 5,933,170) discloses an ink jet head (40) comprising two components (42, 44) bonded together (Fig. 1).

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

February 10, 2005